PFU

Instruction Prefetch Unit

110.

ISU

Instruction Issue Logic

120

PIP

Pipeline Control Unit

130

100

Instruction Dispatch

Register Read/write enables

LSU

Load/Store Unit

140

ALU

150

MAU

160

ARF

170

ORF

180

BYP

Data Forwarding Unit

190

Source Buses

Destination Buses

ALU: Arithmetic & Logic Unit
MAU: Multiply-accumulate & Arithmetic Unit
ARF: Address Register File
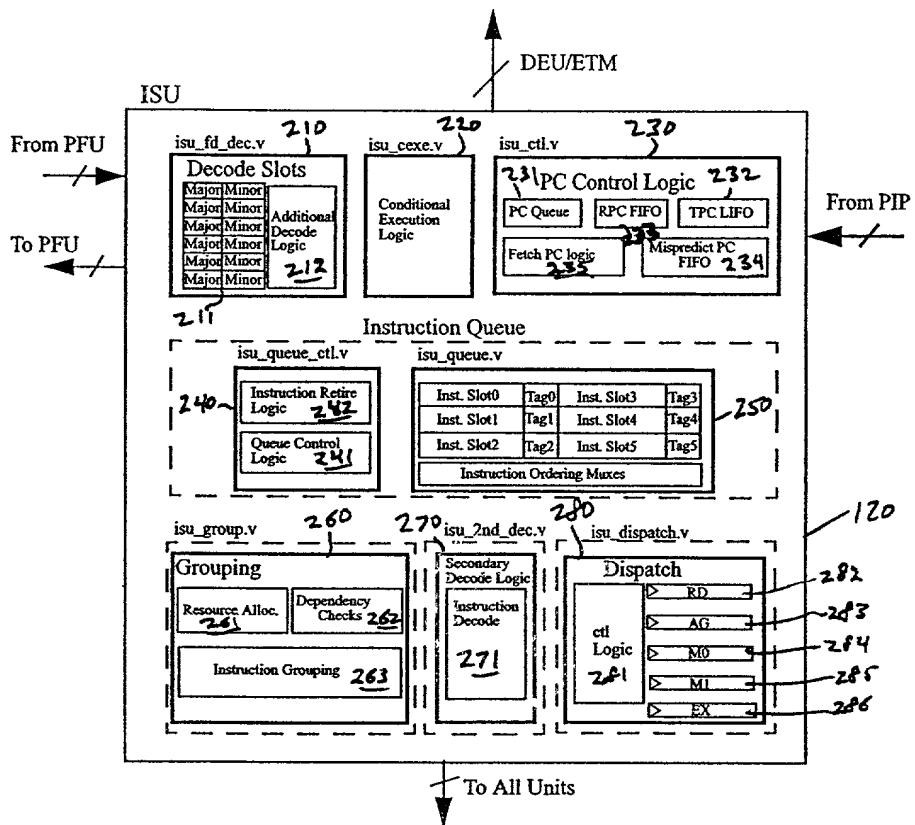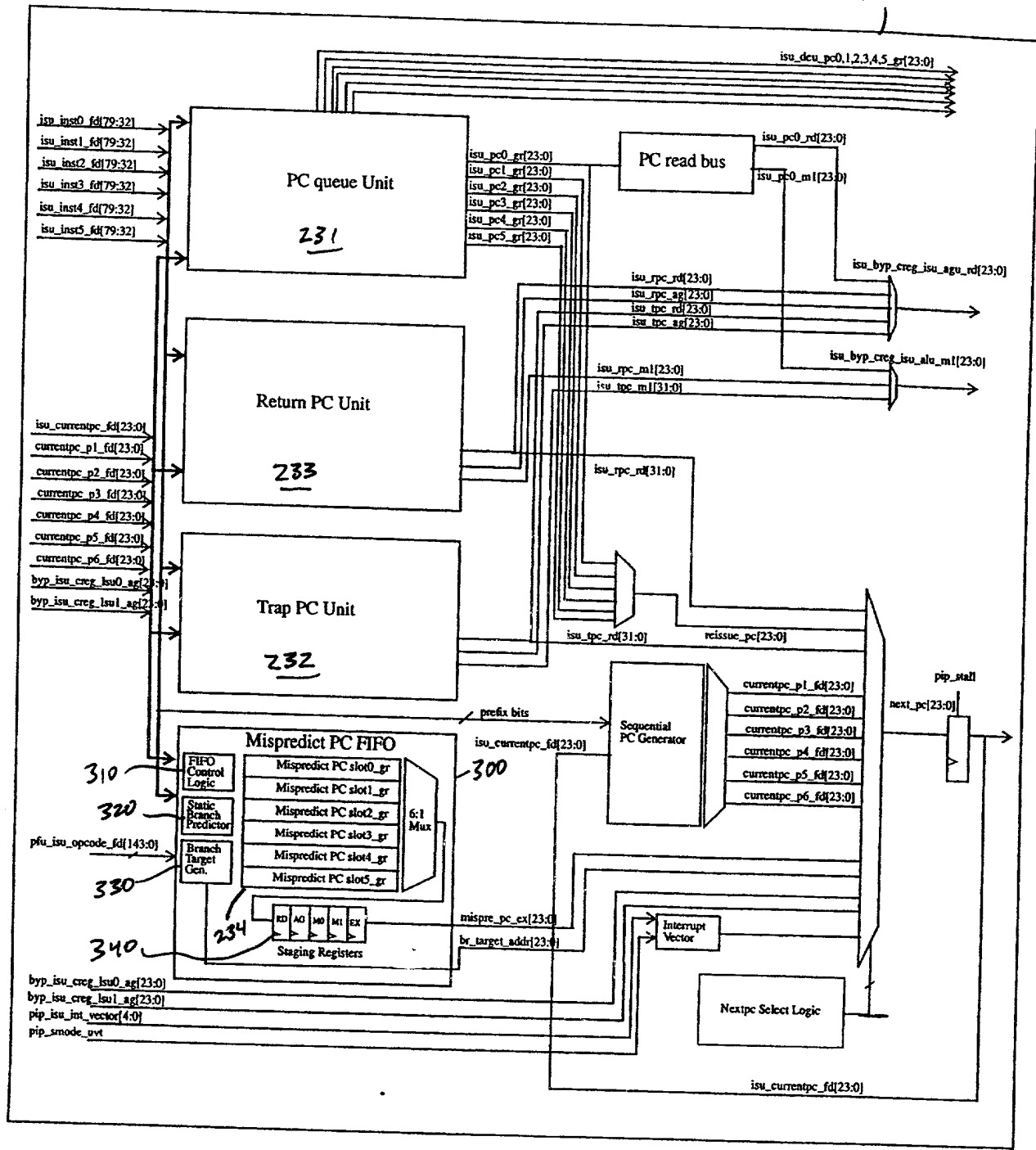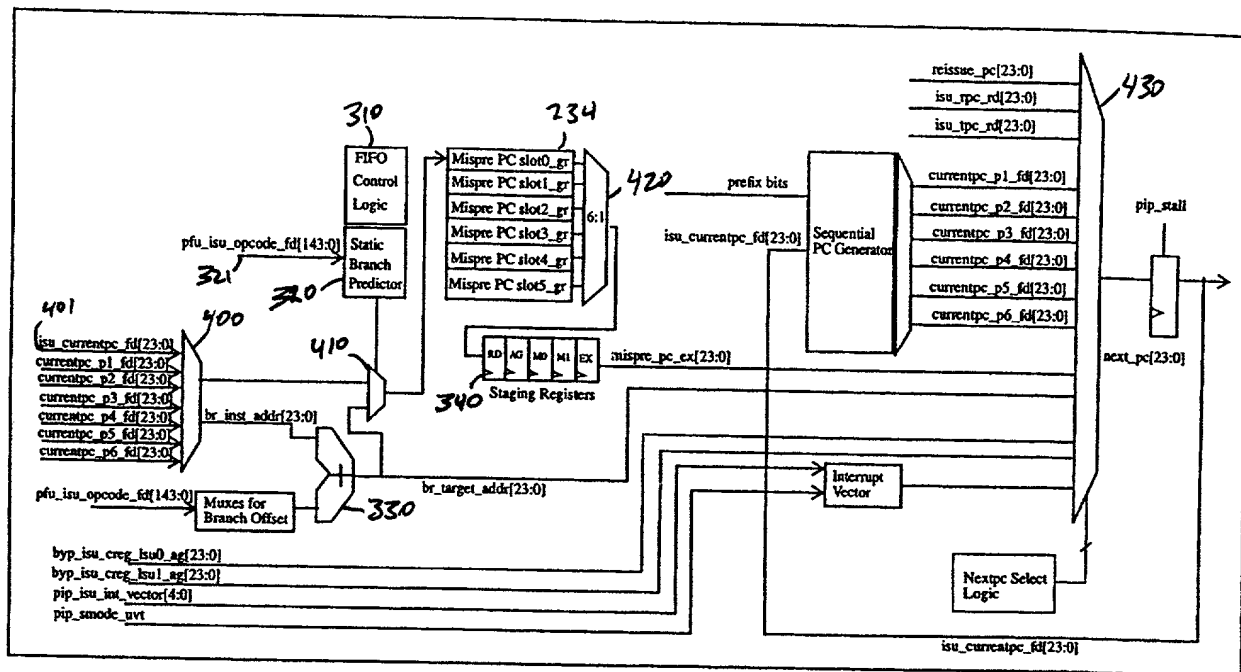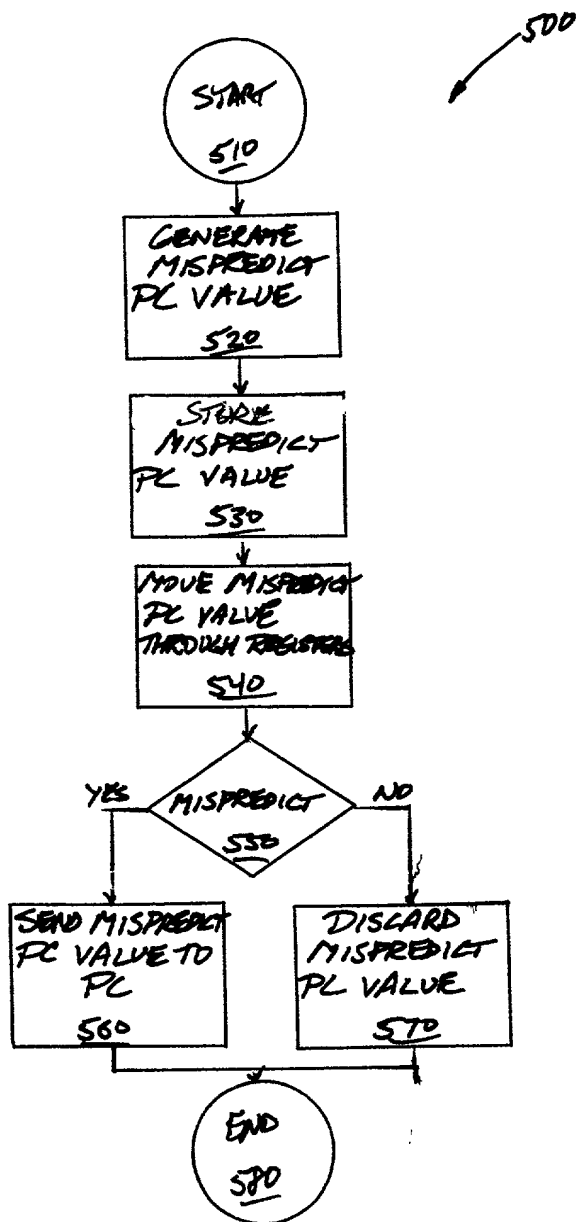ORF: Operand Register File

FIGURE 1

FIGURE 2

FIGURE 3

FIGURE 4

500

START
510

GENERATE
MISPREDICT
PC VALUE
520

STORE
MISPREDICT
PC VALUE
530

MOVE MISPREDICT
PC VALUE
THROUGH REGISTERS
540

YES   MISPREDICT   NO
550

SEND MISPREDICT
PC VALUE TO
PC
560

DISCARD
MISPREDICT
PC VALUE
570

END
580

FIGURE 5